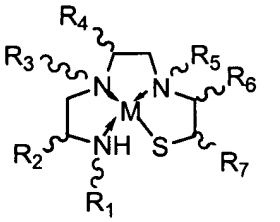
This listing of claims will replace all prior versions, and listings, of claims in the application:

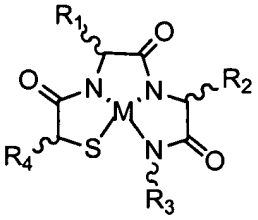
Listing of Claims:

Claims 1 – 23 (Canceled)

Claim 24 (New): A combinatorial library of metallopeptides bound to solid phase, wherein each constituent metallopeptide library member is selected from the group consisting of:



I



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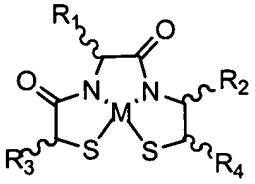

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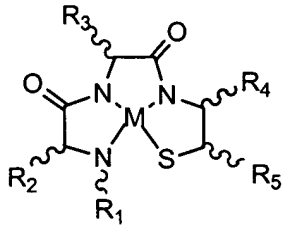

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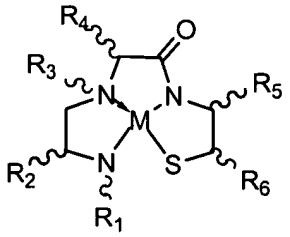

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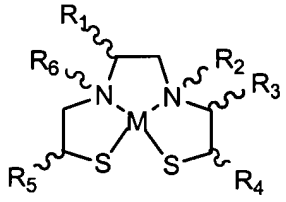

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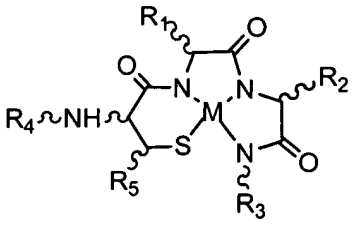

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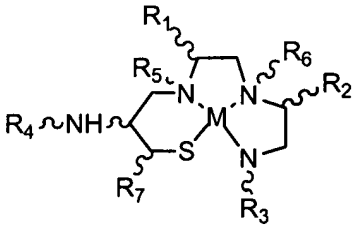

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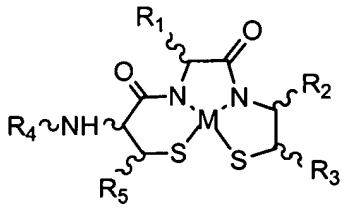
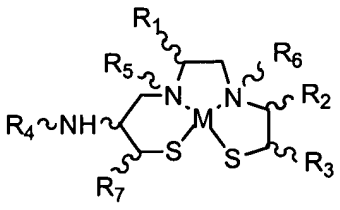


IX



X

where:

R_1, R_2, R_3, R_4, R_5, R_6, and R_7 are each independently hydrogen or a functional group; and

M is a tetradentate metal ion, metal-oxo group, metal-nitride group or N-nitrido substituted metal-nitride; and,

wherein each constituent metallopeptide library member varies by at least one of R_1, R_2, R_3, R_4, R_5, R_6, or R_7.

Claim 25 (New): The combinatorial library of claim 24 wherein the tetradentate metal ion is rhenium.

Claim 26 (New): The combinatorial library of claim 24 wherein M is rhenium-oxo.

Claim 27 (New): The combinatorial library of claim 24 wherein M is rhenium-nitride.

Claim 28 (New): The combinatorial library of claim 24 wherein M is N-nitrido-substituted rhenium-nitride.

Claim 29 (New): The combinatorial library of claim 28 wherein N-nitrido-substituted rhenium-nitride is of the formula Re=N-R_8, wherein R_8 is a functional group.

Claim 30 (New): The combinatorial library of claim 24 wherein the functional group is an amino acid side chain.

Claim 31 (New): The combinatorial library of claim 24 wherein at least one of R_1, R_2, R_3, R_4, R_5, R_6, or R_7 is the same for each constituent metallopeptide library member.

Claim 32 (New): The combinatorial library of claim 24 wherein for each constituent metallopeptide library member at least one of R_1, R_2, R_3, R_4, R_5, R_6, or R_7 is a side chain of an L- or D-isomer of 2-Nal, Phe, Trp, Tyr or Ala.

Claim 33 (New): The combinatorial library of claim 32 wherein the library is targeted to one or more melanocortin receptors.

Claim 34 (New): The combinatorial library of claim 24 wherein the combinatorial library is targeted to a known target, and at least one of R_1, R_2, R_3, R_4, R_5, R_6, or R_7 is a side chain of a peptide that binds to the known target.

Claim 35 (New): The combinatorial library of claim 34 wherein the known target is a biological receptor.

Claim 36 (New): The combinatorial library of claim 24 made by a process of split pool synthesis.

Claim 37 (New): The combinatorial library of claim 24 made by a synthetic process wherein the sulfur atom (S) is protected by an orthogonal sulfur atom-protecting group compatible with peptide solid phase synthesis and removable without cleaving the peptide from solid phase.

Claim 38 (New): The combinatorial library of claim 37 wherein the orthogonal sulfur atom-protecting group is S-thio-butyl, acetamidomethyl, 4-methoxytrityl, S-sulfonate or 3-nitro-2-pyridinesulfenyl.

Claim 39 (New): The combinatorial library of claim 37 wherein the synthetic process further comprises removing the orthogonal sulfur atom-protecting group during complexation of M to the metallopeptide library members.

Claim 40 (New): The combinatorial library of claim 24 wherein any reactive sulfur atom in any one or more of R_1, R_2, R_3, R_4, R_5, R_6, or R_7 is protected by a non-orthogonal sulfur atom-protecting group.